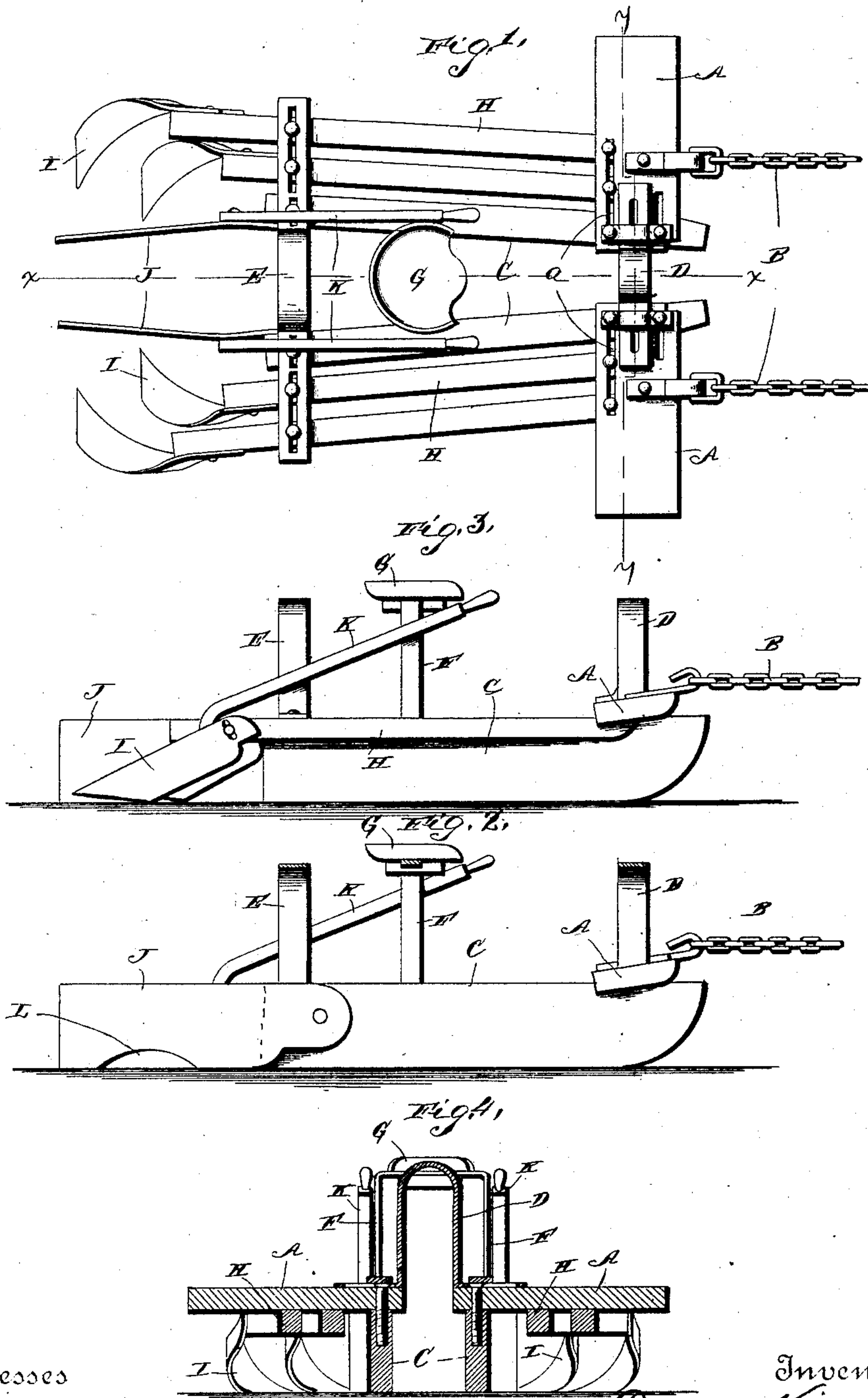


(No Model.)

O. KING & A. MORGAN.  
LISTED CORN CULTIVATOR.

No. 367,530.

Patented Aug. 2, 1887.



Witnesses

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# UNITED STATES PATENT OFFICE.

ORSON KING AND ALFRED MORGAN, OF RANDOLPH, KANSAS.

## LISTED-CORN CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 367,530, dated August 2, 1887.

Application filed June 15, 1887. Serial No. 241,396. (No model.)

*To all whom it may concern:*

Be it known that we, ORSON KING and ALFRED MORGAN, citizens of the United States, residing at Randolph, in the county of Riley and State of Kansas, have invented a new and useful Improvement in Listed-Corn Cultivators, of which the following is a specification.

Our invention is an improved cultivator for cultivating listed corn; and it consists in certain novel and peculiar features of construction, hereinafter fully described and claimed.

In the accompanying drawings, which fully illustrate our invention, Figure 1 is a plan view of our improved cultivator. Fig. 2 is a vertical longitudinal section on line *x x*, Fig. 1. Fig. 3 is a side elevation, and Fig. 4 is a transverse vertical section on the line *y y*, Fig. 1.

Referring to the drawings by letter, A A designate two smoothing-planks, of suitable dimensions, provided near their rear edges with the longitudinal slots *a*. These smoothing-planks are intended to smooth down the ridges, and the draft-chains B B are attached to their forward edges.

Secured to the under sides of the smoothing-planks, at the inner ends of the same, are the protectors and runners C C, which extend backward from the said smoothing-planks, as shown. The inner ends of the smoothing-planks are connected by an arch, D, the ends of which are slotted and adjustably secured to the smoothing-planks by bolts passed through said slots into the smoothing-planks, and the same bolts also secure the runners and protectors C. The rear ends of the runners are connected by a similar arch, E, the ends of which project laterally past the runners, as shown. In use the protectors are intended to run along the bases of the ridges on opposite sides of the plants, and we therefore form these arches about three feet high, in order to pass readily over the tops of the plants. F F are two standards secured about centrally to the protectors, and extending upward to about the height of the arches, and upon the upper ends of the standards we secure the seat G for the driver.

H H designate two or more diverging arms, which have their front ends adjustably se-

cured to the smoothing-planks by means of bolts passed through the slots *a* in the same, their rear ends being adjustably secured to the laterally-projecting ends of the rear arch, E. The rear ends of these diverging arms are provided with scrapers or shovels I, which run along the sides of the ridges and throw the dirt down onto the plants. The rear ends of the protectors are provided with the shields J, which are pivotally secured to the protectors, and can be set at a greater or lesser height from the ground by means of the levers K, which extend up to the driver's seat. The lower edges of these shields are provided with the notches or cut-away portions L, through which a stream of fine dirt passes to the plants.

In operation the cultivator is drawn along the ground, the draft-animals walking on the ridges and the smoothing-planks passing along the tops of the same. In order to facilitate the passage of the smoothing-planks along the tops of the ridges, we set them at a slight inclination, as clearly shown, their rear edges being fitted in notches in the upper edges of the protectors and diverging arms. The protectors pass along on opposite sides of the plants and prevent the dirt being thrown in on them in too great a quantity. The shields and the scrapers cut out all weeds, and the scrapers are given a semicircular twist, so as to throw a steady stream of fine dirt against the shields, which will pass under the same to the roots of the plants.

Our device is simple in construction and efficient in operation, and its advantages will be readily appreciated.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A cultivator comprising the smoothing-planks, the protectors secured thereto and extending backward therefrom, and the diverging arms provided with shovels or scrapers secured to the smoothing-planks on opposite sides of the protectors, substantially as set forth.

2. The combination of the smoothing-planks, the protectors, the arches connecting the inner ends of the smoothing-planks and the rear ends of the protectors, respectively, and the

diverging arms provided with shovels or scrapers having their front ends adjustably secured to the smoothing-planks and their rear ends adjustably secured to the projecting ends of the rear arch, substantially as specified.

3. A cultivator comprising the smoothing-planks, the protectors secured thereto, the shields secured to the rear ends of the protectors and provided with adjusting-levers, the diverging arms secured to the smoothing-planks on opposite sides of the protectors,

and the shovels or scrapers secured to the rear ends of said arms, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ORSON KING.

ALFRED MORGAN.

Witnesses:

MILTON FOREMAN,

H. HANN.